

be found throughout the specification and the originally filed claims and in particular, on pages 11-12, 16 and in the originally filed examples on pages 17, 18, 19 and 20 and in the originally filed claims. No amendment has been made to distinguish the art cited against the instant application. No new matter is believed to have been added by this amendment.

The Examiner has objected to or rejected claims 33-48 under 37 C.F.R. §1.75(c) or under 35 U.S.C. §103 for the reasons which are stated in the Examiner's Office Action dated July 28, 1997. Applicant respectfully submits that the instant claims are now in condition for allowance and presents reasons for the patentability of the instant claims in the sections which are presented hereinbelow.

The Objection to Claims 34, 36, 38, 40, 42, 44, 46 and 48

The Examiner has objected to claims 34, 36, 38, 40, 42, 44, 46 and 48 under 37 C.F.R. §1.75(c) as being of improper dependent form for failing to further limit the subject matter of the previous claim. In particular, the Examiner has indicated that the inclusion of an isocetyl group (branched C₁₆ group) is broader than the original C₁₁-C₁₄ limitation in the independent claims. Applicant agrees and has cancelled the originally filed claims and has added claims which address the Examiner's objection. It is respectfully submitted that the Examiner's objection has been addressed with the newly added claims 49-58.

The 35 U.S.C. §103(a) Rejection

The Examiner has rejected claims 33-38 under 35 U.S.C. §103(a) as being unpatentable over Amaya, Chem Abstract 113:178040c ("Amaya"). The Examiner cites Amaya for teaching the use of unsaturated polycarboxylic acid alkyl esters wherein the ester groups are equal to or greater than 10 carbons. The Examiner relies on Amaya for further teaching specific and structurally similar compounds which read on the fumarates used in the present invention. In addition, the Examiner contends that the

Amaya compounds "show good compatability with the skin."

Based upon the putative disclosures of Amaya, the Examiner contends that the present invention is unpatentable because it would have been obvious to have used the compositions of Amaya in cosmetics which are applied to the skin. The Examiner further contends that the present invention is obvious since a skilled artisan would be motivated to add the compositions of Amaya to other well known cosmetics which were applied to the skin because of the good skin compatibility properties of those compositions. Applicant respectfully traverses the Examiner's rejection.

The present invention relates to novel cosmetic emollient compositions which are diester fumarates containing C₁₂ to C₁₅ straight chain alkyl side chains as well as certain cosmetic formulations based upon these novel fumarate diesters. The diester fumarates according to the present invention are advantageously prepared by reacting a mixture of C₁₂ to C₁₅ straight chain alcohols with fumaric acid to produce the fumarate diesters. Fumarate diesters according to the present invention have unexpected properties- these compounds exhibit emollient properties and are solids at room temperature, but melt at body temperature. This is particularly surprising given that the corresponding maleate esters are liquids at room temperature and do not exhibit the same advantageous characteristics exhibited by the compositions of the present invention. Thus, the fumarate diester compounds according to the present invention may be advantageously employed in cosmetic formulations to instill these formulations with properties which represent significant improvement in feel and physical properties. Moreover, these compounds are safe and effective for use in cosmetic formulations.

The Examiner contends that the disclosure of Amaya renders the present invention unpatentable. Applicant respectfully submits that Amaya is actually inapposite to the present invention. Amaya relates to the use of certain unsaturated polycarboxylic acid alkyl esters to be included in a mixture of

comonomers to produce a copolymer in the form of a spherical fine particle powder which is included in cosmetic applications. Based upon the disclosure presented with the Examiner's office action, it is respectfully submitted that Amaya is completely inapposite to the present invention.

Amaya teaches that a number of polycarboxylic acid alkyl esters may be used with other comonomers to produce powder-like polymers. Thus, Amaya, in the first instance, teaches any number of unsaturated polycarboxylic acid esters to be reacted with other comonomers, such as for example, crosslinking monomers, to produce polymeric compositions which have powder-like qualities. The polymeric compositions of Amaya are completely unlike the present invention. In the second instance, there is absolutely no teaching or oblique suggestion in Amaya that the cosmetic emollients of the present invention which are based upon diesters of fumarates and a mixture of straight chain C₁₂ to C₁₅ alcohols would be advantageous. Indeed, the only example which is posited by Amaya is a polymer which is produced from the polymerization of a mixture of monomers comprising distearoyl maleate, styrene and divinylbenzene utilizing benzoyl peroxide as a catalyst for the polymerization. Thus, the only example cited by Amaya relies on a polycarboxylic acid which is clearly unrelated to the present invention because it is based upon a C₁₈ alcohol diester of maleic acid. This is clearly not the present invention. Distearoyl maleate is a product which is formed from the reaction of a C₁₈ alcohol with maleic acid, an unsaturated polycarboxylic acid diester which is a liquid at room temperature. Amaya advantageously employs this maleic acid diester to form polymeric compositions.

Amaya clearly does not teach or suggest the present invention. Moreover, based upon the teachings of Amaya, there is clearly no motivation to even look for a cosmetic emollient which has the characteristics of the present invention-i.e., the desirable characteristics of being a solid at room temperature and a liquid at body temperature. In Amaya, such considerations are completely irrelevant to what Amaya is attempting to

accomplish. In Amaya, the goal is to produce a polymeric composition which has powder-like characteristics. Thus, for Amaya, any polycarboxylic acid diester which is a liquid at elevated polymerization temperatures and has an alkyl group which is of sufficient size to instill powder-like characteristics to the resulting polymer, may be utilized as a comonomer. Thus, in choosing a polycarboxylic acid diester comonomer, Amaya does not focus on characteristics which are similar to those of the present invention, but rather focuses on characteristics which are unrelated to the compositions of the present invention. Once polymerized, Amaya is not relying on the unique characteristics of the polycarboxylic acid diester chosen, but rather is relying on the alkyl side-chains contributing whatever benefit they do to the polymeric compositions produced. In short, Amaya provides absolutely no motivation whatsoever to produce the present invention.

It is respectfully submitted that Amaya does not teach or even remotely suggest the present invention. To the extent that Amaya teaches anything, it is the use of an unsaturated polycarboxylic diester as a comonomer in a mixture of comonomers to produce a polymeric composition having powder-like characteristics. There is clearly no teaching of the present invention in Amaya--indeed, a fumaric acid diester based upon a mixture of C₁₂ to C₁₅ alcohols is not even mentioned by Amaya. Moreover, the unexpected characteristics that the present compositions exhibit is clearly irrelevant to Amaya's teachings and there is absolutely no motivation from the disclosure in Amaya to produce any composition which is solid at room temperature and a liquid at body temperature, let alone the compositions of the present invention. In short, Amaya is a reference which simply does not teach or suggest the present invention. It is respectfully submitted that the Examiner has not made out a cogent case that the present invention is unpatentable.

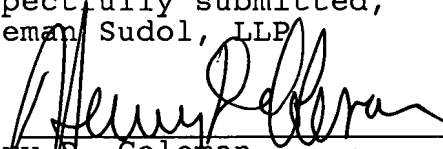
Applicant respectfully submits that the cited art is insufficient for rendering the instant invention obvious. For all of the above reasons, Applicant respectfully asserts that the

claims set forth in the amendment to the application of the present invention are now in compliance with 35 U.S.C. Applicant respectfully submits that the present application is now in condition for allowance and such action is earnestly solicited.

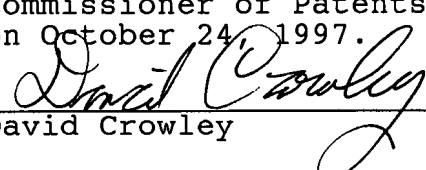
Applicant has cancelled 16 claims (4 independent) and added ten claims (four independent). No fee is due for the presentation of this amendment. Applicant encloses a Revocation of Power of Attorney and Appointment of Substitute Counsel and an original assignment

Please charge any fee due to Deposit Account No. 04-0838.

Respectfully submitted,
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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C., 20231, on October 24, 1997.


David Crowley